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A Longitudinal Analysis of Family Relationships and Children's School Achievement in One- and Two-Parent Families

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by
Gerald R. Adams and Bruce A. Ryan

June 2000

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This report is part of a set of research studies on the National Longitudinal Survey of Children and Youth. /
Le présent rapport fait partie d'un ensemble d'études sur l'Enquête longitudinale nationale sur les enfants et les jeunes.

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Abstract

This paper analyzes a subset of families and children from the National Longitudinal Survey of Children and Youth (NLSCY) in order to assess associations of such factors as family structure, family processes, child characteristics, with teachers' judgments of children's academic success. Included in the investigation are the children between the ages of 6 and 11 years in two-parent and single-parent households on which data is complete for all research variables in Cycles 1 and 2 of the NLSCY. The analyses were undertaken to determine which family processes are predictive of teachers' judgments of academic standing for children in one- and two-parent families. A complex set of variables is included in the analysis. Children's personal characteristics measured are academic skill or focus, level of hyperactivity and inattention, anxiety and depression, and prosocial behaviors. Family measures include assessments of positive parenting, ineffective parenting, rational parenting, consistency of discipline, family dysfunction, parental depression, social support for the family, and socioeconomic status (SES) indicators.

The findings of this study are complex and multivariate; they reveal a web of social and family ecology links to students' academic success in school. Two-parent households are associated with higher socioeconomic status indicators, more support for the family, less parental depression, and less family dysfunction than one-parent households. Two-parent households also had children who were less hyperactive, more academically skilled, less anxious or depressed, and (judged by teachers) good in academic standing. These findings were consistent for both Cycle 1 and Cycle 2. Parental and family characteristics related to children's academic success are largely consistent between one- and two-parent families. However, the analysis also found some important differences. Socioeconomic status appears unrelated to either positive parenting or ineffective parenting in two-parent families, but higher SES for one-parent families is associated with lower levels of positive parenting and higher levels of ineffective parenting. These particular findings suggest that when single parents are successful in increasing their economic standing, there is added stress to the family such that the task of parenting might be more difficult. While both family structures can have family processes associated with good or poor academic success of children, the single-parent family, in general, is the more stressed and strained.

Résumé

L'analyse porte sur un sous-ensemble de familles et d'enfants participant à l'Enquête longitudinale nationale sur les enfants et les jeunes (ELNEJ) et vise à évaluer les associations entre des facteurs comme la structure familiale, les processus familiaux et les caractéristiques des enfants et le verdict des enseignants quant au succès scolaire des enfants. L'étude inclut des enfants âgés de 6 à 11 ans issus de familles biparentales et monoparentales sur lesquels on dispose de données complètes pour toutes les variables de recherche des cycles 1 et 2 de l'ELNEJ. Les analyses ont été réalisées dans le but de déterminer quels processus familiaux peuvent prévoir le verdict des enseignants sur le niveau de connaissance des enfants issus de familles biparentales et monoparentales. Elles font appel à un ensemble complexe de variables. Les caractéristiques personnelles mesurées chez les enfants sont : les aptitudes, le niveau d'hyperactivité et d'inattention, le niveau d'anxiété et de dépression, et les comportements prosociaux. Les mesures concernant les familles comprennent des évaluations d'indicateurs liés au caractère positif, inefficace ou rationnel de l'éducation des enfants, à la cohérence des mesures disciplinaires, au caractère dysfonctionnel de la famille, au niveau de dépression des parents, au soutien social à la famille et au statut socio-économique.

Les résultats de l'étude sont complexes et multidimensionnels; ils révèlent un tissu de liens entre le succès scolaire et des facteurs sociaux et liés à l'écologie familiale. Les familles biparentales sont associées à des indicateurs de statut socio-économique plus élevés, à un soutien à la famille plus important, à un niveau inférieur de dépression parentale et à un niveau dysfonctionnel familial moindre que les familles monoparentales. En outre, les enfants des familles biparentales étaient moins hyperactifs, avaient de meilleures aptitudes scolaires, étaient moins anxieux ou déprimés et ont reçu de leurs enseignants une bonne évaluation quant à leur niveau de connaissance. Ces résultats sont cohérents dans le cas des cycles 1 et 2. Les caractéristiques des parents et des familles liées au succès scolaire des enfants sont largement uniformes entre les familles monoparentales et les familles biparentales. Cependant, l'analyse a également mis en évidence des différences importantes. Le statut socio-économique ne semble associé ni à un rôle parental positif ni à une éducation inefficace des enfants dans les familles biparentales, mais un statut socio-économique plus élevé chez une famille monoparentale est associé à des niveaux inférieurs d'éducation positive des enfants et à des niveaux supérieurs d'éducation inefficace. Ces résultats particuliers suggèrent que lorsque les chefs de famille monoparentale réussissent à améliorer leur situation économique, cela impose à la famille un stress accru qui pourrait rendre plus difficile le rôle parental. Même si les deux structures familiales peuvent comprendre des processus familiaux associés à de bons ou à de mauvais résultats scolaires chez les enfants, en général, la famille monoparentale est plus stressée et plus tendue.

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Foreword

The National Longitudinal Survey of Children and Youth (NLSCY) is a unique Canadian survey designed to follow a representative sample of children from birth to early adulthood. It is conducted in partnership by Human Resources Development Canada (HRDC) and Statistics Canada. Statistics Canada is responsible for data collection, while HRDC, the major funder, directs and disseminates research. Data collection began in 1994 and continues at two-year intervals.

The survey for the first time provides a single source of data for the examination of child development in context, including the diverse life paths of normal development. The survey and the research program were developed to support evidence-based policy, using a human development view of the early decades of life. This research paper is part of an ongoing series of papers emanating from a program of research that examines NLSCY data collected in the first two cycles (1994, 1996) of the survey.

1. Introduction

1.1 General Background

The well-being of Canadian children has become a focal concern for a variety of political, governmental, school, and parenting groups. One question, often addressed by such groups, focuses on children's academic success and the effectiveness of the school in assisting intellectual development, mental health and well-being. As community leaders, teachers, and parents become more involved in their children's academic growth, there is increased consideration of how the community, family, and school have unique and interacting influences on children's success. For example, our own interest is in determining if socioeconomic status, community support, and family processes of one parent versus two parent households have similar or different predictable influences on elementary school children's personal characteristics and academic success.

The main objectives of this report are to (a) examine the impact on school achievement of a network of family, parent and child characteristics, and (b) to compare the differences among these family, parent and child characteristics in the prediction of school achievement for one-parent and two-parent families.[1] One of the first studies of this nature was published by Jencks and his American colleagues (1972). *Inequality: A Reassessment of the Effects of Family and Schooling in America* (Jencks et al., 1972) provides one of the first North American attempts to assess a multitude of factors associated with children's school success. In part, stimulation from this pioneering study has resulted in a wide array of investigations examining the family impact on children's educational achievement and behavior (e.g., Dornbusch & Ritter, 1990; Floyd, 1997; Lam, 1997). Most of this research has focused on the influences of socioeconomic status (e.g., Brookhart, 1998), parental expectations (e.g., Seginer, 1983), and general parenting styles (Dornbusch & Ritter, 1990; Paulson, 1994). Also in this research, comparisons have been made between different kinds of families and their effects on children's school success. At the same time these studies have typically not investigated the possible complex social interactions and linkages that might exist within families of different types and how these processes might predict children's school success.

[1] An additional original purpose for this study was to examine the impact of changes in family status (e.g., divorce to married status) on the relations between family processes and academic achievement. However, missing data on many of the key variables precluded this effort due to extremely small final sample sizes.

1.2 The Family-School Relationship Model

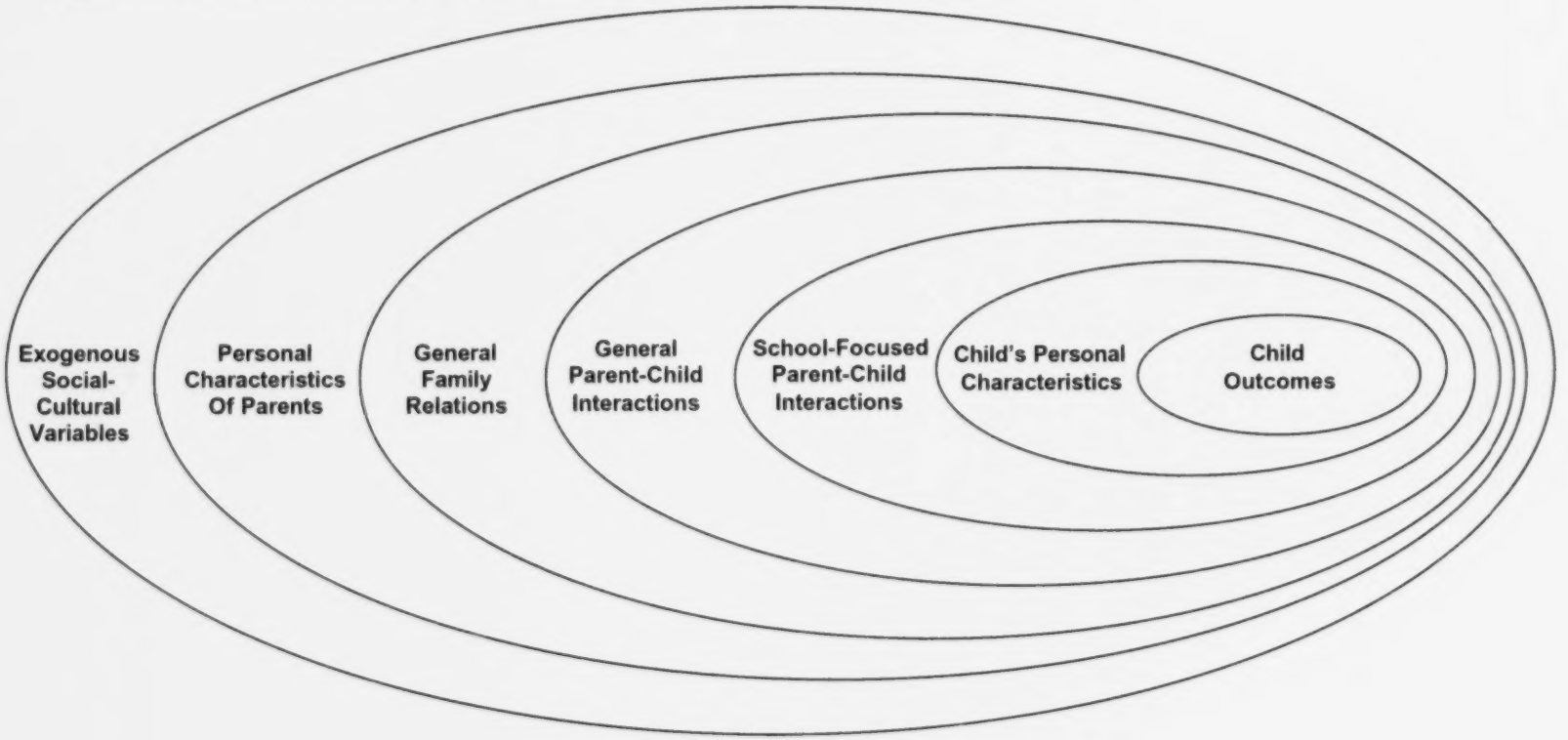
Several conceptual frameworks have been advanced regarding inter-linking family processes that could influence children's behavior and achievement in a school setting (e.g., Green, 1995; Marjoribanks, 1996; Scott-Jones, 1995). Ryan and Adams (1995) have proposed the Family-School Relationship Model as one such framework (see Figure 1). Although the model and its operations aren't the primary focus of this report, it does provide the conceptual and analytic framework for the investigation. This model assumes one can examine the effects of the family on school successes using a proximal to distal continuum of the possible influences on children's behavior and performance in school. Variables closest to the child's performance are likely to have the largest influences, while those further removed from the school and schooling are likely to have smaller influences. The classes or levels of variables that Ryan and Adams (1995) suggest are important from most proximal to most distal to school success (Level 0) include, a child's personal characteristics (Level 1), school-focused parent-child interactions (Level 2), general parent-child interactions (Level 3), general family environment (Level 4), personal characteristics of parents (Level 5), and socioeconomic, cultural or community factors (Level 6). There can also be further sub-levels within a level based on the principle of a proximal to distal continuum.

Several investigations have now been completed to assess the use of the Ryan and Adams model in predicting family-school relations. No investigation has yet included all levels, but rather various combinations of levels to predict school adjustment and academic achievement. Using data from one Ontario Catholic school system, family climate (cohesion and conflict), parent-child interactions about school issues (e.g., helping, support, monitoring, pressure, and press for intellectual development), child's intellectual effectiveness and effort, and school achievement (marks in English and Math) have been found to interlink in predicting children's school success (Adams, Ryan, Keating, & Midgett, 2000). Further, the model has been used with this same sample of 161 4th grade and 151 7th grade children to assess the role of the family in predicting children's rule compliance, peer sociability, and social maladjustment in school (Adams, Ryan, Ketsetzis & Keating, 2000; Ketsetzis, Ryan & Adams, 1998).

The most comprehensive test thus far of the utility of the Family-School Relationship Model was undertaken using data from the first wave of the National Longitudinal Survey of Children and Youth (NLSCY: Ryan & Adams, 1999). The analyses involved a sample of 2,134 girls and 2,168 boys aged

6 to 11 years. The analytic model included representative variables of Levels 6, 5, 4, 3, 1 and 0. Higher socioeconomic status (SES) was observed to have a large and positive influence over children's school achievement where SES had both direct and indirect effects on school success. Among other findings, it was observed that elementary school-aged children's school success was associated with a web of interlinking influences on achievement. For example, (a) socioeconomic status was associated with higher levels of social support by community members, (b) social support was associated with less parental depression, (c) higher levels of depression predicted greater family dysfunction, with (d) family dysfunction predicting greater ineffectiveness of the parent, and, in turn, (e) ineffective parenting predicted poorer academic focus which was highly predictive of academic achievement. Comparisons were made between boys and girls, and between younger and older children; similar findings were observed for all comparisons.

Figure 1: A Model of Family-School Relationships



1.3 Relevant Constructs Based on Research Literature

Considerable evidence has now accumulated to establish that what happens in the system of family relationships has an important and statistically significant association with children's school success (Epstein, 1989, 1991, 1996; Hoover-Dempsey & Sandler, 1997; Ketsetzis et al., 1998; Ryan & Adams, 1995). Individual research reports and comprehensive reviews of published studies demonstrate that an extremely wide variety of parental and family characteristics can have an impact on children in school. Beyond the now widely accepted belief that the family's socioeconomic status has an influence on achievement, it has also been shown that parental characteristics, the overall nature and atmosphere of the family, the general nature of parent-child relationships, and the interactions between parents and children concerning school activities all have an influential role in determining achievement (e.g., see Ryan & Adams, 1999). Evidence also shows that the child's own personal characteristics are powerful determinants of achievement (Wang, Haertel, & Walberg, 1993).

The NLSCY offers a variety of potential variables for assessing the Family-School Relationship Model and its utility in testing family processes that might predict school achievement. Data on important child characteristics are available in the survey: *academic focus*, *hyperactivity* and *attention deficit*, *anxiety-depression*, and *prosocial behaviors*. Academic focus, which refers to the child's capacity to always be ready for school work, to concentrate on learning tasks, to persist on academic tasks, and to ignore distractions, has been shown in previous research to be highly predictive of achievement levels (e.g., see Gesten, 1976; Ketsetzis et al., 1998; Ryan & Adams, 1999). There is a good deal of evidence linking attentional difficulties with achievement (Barkley, 1990; Hinshaw, 1992; Maguin, Loeber & LeMahieu, 1993), although Coie and Dodge (1998) have claimed that the precise nature of the linkage between the two remains unclear. Further, evidence suggests that higher levels of anxiety and depression are unpleasant emotional states that diminish concentration and focus on learning. Likewise, children who are socially adjusted, compliant to rules, and who engage in good school citizenship are likely to manifest prosocial behaviors that could facilitate academic success. Academic focus and prosocial behavior constitute potential strengths whereas attention deficit and anxiety-depression are potential weaknesses in child characteristics that might be linked to school success.

The NLSCY data include four measures of parent-child interactions that are potentially significant for achievement. *Positive parent-child interactions* have been shown to be associated with a broad range of child development measures (Bar-Tal, Nadler, & Blechman, 1980; Fabes, Eisenberg, Karbon, Troyer, & Switzer, 1994) and Ketsetzis et al (1998) found a significant relationship between parental support and school adjustment. In contrast, however, Ryan and Adams (1999) failed to find any significant association between positive parenting and achievement using the first wave of data from the NLSCY. It is possible that this variable may reveal its effects on achievement over time. The second parent-child interaction variable from the survey is *ineffective and hostile parenting* which has been widely explored by Patterson and his associates (e.g., Patterson, Reid, & Dishion, 1992). Ryan and Adams (1999) found that in the first wave of data from the NLSCY that ineffective parenting had a significant and powerful association with achievement. Other parent-child interactions of potential importance include *consistency of discipline* and the use of *rational parenting behaviors* when dealing with children's conduct (Scott-Jones, 1995). The use of a consistent pattern of parental responses to children's behavior and rational parenting that includes discussion, avoidance of punitive behavior, and the encouragement of effective decision-making about acceptable and unacceptable behavior, may provide contributions to children's school success by helping children to understand what acceptable behaviors are in regards to conduct and expectations.

In addition to these four measures of parent-child relationships, the survey also provides an overall assessment of the level of *family dysfunction*. This variable is distinguished from parent-child interaction variables because it is a description of the general way all family members interact with each other. It is a measure of the atmosphere that is characteristic of the family as a group. Previous research on family dysfunction has shown that it has significant negative associations with achievement (Conger, Conger, Elder, Lorenz, Simons, & Whitbeck, 1992; Forehand, Thomas, Wierson, Brody & Fauber, 1990; Grolnick & Slowiaczek, 1994; Ryan & Adams, 1999).

Beyond the inter-relational processes operating in families, the personal characteristics of the parents are often important. The survey contains two useful parent measures: *parental depression* and parent-perceived *social support*. Earlier evidence (Forehand, McCombs, & Brody, 1987; Roseby & Deutch, 1985; Ryan & Adams, 1999; Thomas & Forehand, 1991) has demonstrated the negative implications

of parental depression for children's school success and adjustment. Parents' ratings of their level of perceived social support can be taken, in part, as a measure of their sense of security and thus properly interpreted as an indicator of a characteristic of the parent but external to the parent in the form of a social environment that surrounds the parent's personal characteristics. The confidence that stems from this feeling of support has been shown to act as a buffer against a wide variety of negative forces that operate on the family in difficult times (Garbarino, 1992). Ryan and Adams (1999) have observed that social support is predictive of the level of parental depression in Canadian families.

Finally, outside of the family itself, the nature of the family's context within the community has important implications for children. *Socioeconomic status* has been repeatedly shown to be an important influence on achievement (Booth & Dunn, 1996). The educational level of the family members, their potential earnings, and comparative social status provide for the human and economic capital that supports the social or interpersonal capital of family interactions (Coleman, 1988, 1990; Marjoribanks, 1993).

1.4 Family Structure and Children's School Success

In addition to the widely documented socioeconomic effects on school achievement (Booth & Dunn, 1996), the nature of the family structure has been considered in the study of children's behavioral adjustment and school success (e.g., see Amato, 1987,Stuart & Abt, 1981; Teachman, Carver & Paasch 1999). For example, Demo and Acock (1996) used the National Survey of Families and Households in the United States to examine the differences between intact first-married families, divorced single-parent families, stepfamilies, and continuously single mother-headed families regarding young adolescents socioemotional adjustment, academic performance, and global well-being. The first-marriage intact homes had children who performed the best across all indicators of well-being and school success. The continuously single mother-headed families had the lowest income and slightly less academically successful children. The divorced and stepfamilies tended to report more conflict and disagreement.

Coleman (1988, 1990) has advanced a provocative rationale for finding differences between family types. He distinguishes three forms of "capital" that families might possess. The *financial capital*

involves the total family's wealth and purchasing power. The *human capital* involves the strength and influence that accompanies the parent's education. Combined financial and human capital represent the basic constraints and opportunities that are associated with a family's resources. However, *social capital* involves the density of interactions between parents, their children, and the school system. Coleman argues that the social relationships of such capital provides the means by which the human capital is developed. Without positive parent-child relationships there is little or no mechanism to transmit available human and financial capital to children.

Coleman (1988) uses, as one example, family structure as a means of strengthening social capital in the family. Family structure deals with the number of parents present in the family. His work focuses on the absence of a family member that creates a structural deficit that leads to less social capital for children to draw on and use to support their development. In this framework, in comparison to two-parent families, one-parent households are seen as having less time available to invest in parent-child interactions. Indeed, there is considerable evidence that indicates children in single-parent households receive less encouragement and less assistance with homework than children in two-parent homes (e.g., Amato, 1987; Astone & McLanahan, 1991; Dornbusch et al., 1985; Nock, 1988).

Family atmosphere and parenting practices are the substance of social capital in the family. Steinberg, Dornbusch and Brown (1992) suggest that three specific aspects of the authoritative family (see Baumrind, 1989) are the major components of parenting that produces a competent child or adolescence. This trinity includes acceptance and warmth, supervision and control, and psychological autonomy or democracy. Approximations to these three components in the NLSCY data set include positive parenting, ineffective and hostile parenting, consistency of discipline, and rational parenting behaviors.

Using Coleman's (1988) structural deficiency hypothesis, one can speculate that intact families offer more economic and human capital, than single-parent families. Further, single-parent families may be limited in their capacity to provide the same level of social capital as intact-families, therein being more strained and less facilitative in promoting children's emotional well-being and academic success.

2. Research Objectives

The general aim of this investigation was to determine how processes in the system of family relationships have an association (impact) on children's emotional well being and achievement at school. Data were used from Cycle 1 and 2 of the NLSCY to address the following research objectives:

- Assess the stability of the Family-School Relationship Model as it is associated with children's school achievement by comparing data in the two time periods.
- Examine the similarities and differences between intact two-parent and single-parent families that are associated with the child's personal characteristics and school achievement.

3. Method

3.1 Sample

Cycle 1 data were initially used for the 6 - 9 year-old children who had complete data for the variables under consideration. These children came from 4,925 intact and 261 single-parent households. Sample cases were eliminated if they had missing data on key variables of interest and were then connected with retesting in Cycle 2. Only subjects who were in an intact two-parent or a single-parent for Cycle 1 (6 - 9 years old) and Cycle 2 (8 - 11 years old) were included in the sample for this study. If less than 5% of the respondents' data on any given variable was missing a mean substitution was used to establish complete data for each subject. The final sample consisted of 1,321 two-parent and 197 single-parent households. Analyses of males and females resulted in few significant gender differences. Given that the focus of this study was on family structure, the smaller number of single-parent households made it questionable to sub-divide by gender in the multivariate analyses used in this investigation.

3.2 Measures

Achievement (Level 0) was measured by a single item from the teacher questionnaire in Cycle 1 and Cycle 2. Teachers rated each child on the question, "How would you rate this student's current achievement across all areas [reading, mathematics, written work]?" Teachers rated student achievement on a five-point scale from, "near the top of the class" to "near the bottom of the class." Demaray and Elliott (1998), Gerber and Semmel (1984) and Hoge and Coladarci (1989) provide reviews of research literature indicating that teachers' judgments are accurate predictors of achievement using ranking and rating techniques like the one used in this study.

An *Academic Focus Scale* (Level 1) was developed by combining scores on six items from the teacher questionnaire. Children were rated by their teachers on a variety of academic skills. Sample items from the scale are, "listens attentively", "follows directions", or "works independently." Higher scores indicate better levels of academic focus. Cronbach's alpha for the scale was .91 during Cycle 1.

A *Hyperactivity-Inattention Scale* (Level 1) consisting of 8 items from the parent questionnaire provided a measure of the children's level of hyperactivity and inattention. Sample items are, "can't sit

still, is restless or hyperactive" and "can't concentrate, can't pay attention for long." Higher scores indicate greater numbers of hyperactive-inattention behaviors. The alpha for this scale was .84 in Cycle 1.

An *Emotional Disorder Scale* (Level 1) measuring children's *anxiety-depression* (Level 1) was used from the parent questionnaire. The scale contains 8 items and has an alpha of .79 in Cycle 1. Example items include, "Is worried," "Cries a lot," and "Is nervous, high strung or tense." A high score indicates the presence of behaviors associated with anxiety and depression.

A *Prosocial Behavior Scale* (Level 1) consisting of 10 items was used from the teacher questionnaire. The Cycle 1 alpha was .90. Sample items include: "Shows sympathy to someone who has made a mistake," "Will try to help someone who has been hurt," or "If there is a quarrel or dispute will try to stop it." A high score indicates the presence of prosocial behaviors such as helping, sympathy, comforting, and resolving disputes.

The *Positive Interactions Between Parents and Child Scale* (Positive Parenting, Level 3), consisting of five items from the parent questionnaire, provided a measure of positive, supportive interactions between parents and children. Sample items are, "How often do you praise (name) by saying something like 'Good for you!' or 'That's good going!' and "How often you and he/she talk or play with each other, focusing attention on each other for five minutes or more, just for fun?" Higher scores indicate positive parenting with the child. The Cycle 1 alpha was .81.

The *Ineffective and Hostile Parenting Scale* (Level 3) consists of 7 items from the parent questionnaire. Sample items include, "How often do you get angry when you punish (name)?" and "How often do you get annoyed with (name) for saying or doing something he/she is not supposed to do?" High scores reflect a hostile, angry and reactive parenting style. The alpha for this scale at Cycle 1 was .71.

The *Rational Parenting Scale* (Level 3) consisted of 4 items and had an alpha of .57 for Cycle 1. Items are taken from the parent questionnaire and include responses to the following questions, "When 'name' breaks the rules or does things that he/she is not supposed to do, how often do you: raise your voice, scold or yell at him/her; calmly discuss the problem; use physical punishment; describe alternative

ways of behaving that are acceptable?" For the purposes of the analysis, the two items on scolding and use of physical punishment were reversed in the scoring of this scale so that a higher score reflects more rational parenting behaviour.

The *Consistency of Discipline Scale* (Level 3) was obtained from the parents and includes 5 items. The alpha for Cycle 1 was .66. Sample items include, "When you give him/her a command or order to do something, what proportion of the time do you make sure that he/she does it?" or "If you tell him/her he/she will get punished if he/she doesn't stop doing something, and he/she keeps doing it, how often will you punish him/her?" A high score indicates consistent use of punishment in disciplinary situations.

The *Family Dysfunction Scale* (Level 4) is based on 11 items from the parent questionnaire. This measure provides a measure of the level of overall dysfunction in the family with higher scores indicating greater dysfunction. Sample items are, "In times of crisis we can turn to each other for support," "We express our feelings to each other," and "Making decisions is a problem for our family." The alpha in Cycle 1 was .88.

Two measures were used for Level 5: the *Parental Depression Scale* (12 items) and the *Social Support Scale* (6 items). The alpha for the two scales in Cycle 1 data was .82, and .83, respectively. A sample item for the depression scale is, "How often have you felt or behaved this way in the last week: I felt lonely, I had crying spells, or I felt hopeful about the future." Higher scale scores indicated increased level of depression. Sample items for the support scale are, "I have family and friends who help me feel safe, secure and happy" and "There are people I can count on in an emergency."

Socioeconomic Status (Level 6) was determined for the NLSCY by standardizing the measures of education level for the "person most knowledgeable" about the child and spouse, the prestige of occupation for the PMK and spouse, and the household income. This SES measure includes both financial and human capital of the family household.

3.3 Data Analysis Procedures

Procedures similar to those reported in Ryan and Adams (1999) in the study of Cycle 1 data were utilized here. First, correlations, means, and standard deviations were inspected for possible

discrepancies. Second, the data were broken down by gender, and linear structural equation models (Jöreskog & Sörbom, 1989) were developed separately for boys and girls. No differences were observed in the models for boys and girls. Third, the data were then collapsed across gender so that models for two-parent and single-parent households could be developed, first for Cycle 1 and then for Cycle 2. Identical models for each of the family types were observed in Cycle 1 and again in Cycle 2 indicating that the same system of modeled processes are operating in the two cycles of data collection. As a consequence only the Cycle 1 models are reported in order to show within cycle relationships among the variables. Finally, the variables in the Family-School Relationship Model, from Level 1 to Level 6 in Cycle 1, were used to predict Achievement in Cycle 2. The analysis of (a) Cycle 1 data in which comparisons are drawn between intact and single-parent households and (b) the effects of Cycle 1 family process data used to predict Cycle 2 achievement are the focus of the results reported here.

Structural equations were used to analyse the data because, a) the system of relationships among the variables being studied is large and complex and, b) the family-school relationships model offers a basic theory of how the system of variable relationships ought to appear. This approach permits the simultaneous assessment of a large number of relationships among variables and can determine how closely they conform to a theory-predicted pattern. It must be kept in mind, however, that the results of the analyses themselves do not reflect the active interactions among the variables. The dynamic processes that lie behind the system of relationships pictured in the analyses are revealed through our theory and knowledge of the behaviours captured in the measures used in the study. These considerations are dealt with in the discussion section of the report.

4. Results

The correlations among all variables for the two-parent and single-parent households are found in Table 1. Most correlations are modest to moderate in size. One important correlation to note is the association between student achievement as judged by a teacher in Cycle 1 and another teacher at Cycle 2, where $r = .72$, $p < .001$ for children in both family structures. This observation indicates that a child's relative standing on teachers' ratings of achievement remain highly consistent over a two year period. The difference between means for achievement at Time 1 compared with Time 2 was not significant, $t = .55$, $p = .58$. This consistency precluded our potential use of either a difference score or a residual change score.

Table 2 provides the means and standard deviations for the two-parent and one-parent families in Cycle 1 and Cycle 2. A test of equivalence of means between the two family structures for each of the two Cycles revealed some consistent significant differences. Across the two data collection cycles, two parent homes had higher SES, less parental depression, less family dysfunction, and, for the children, less hyperactivity, less anxiety and depression, more academic focus, and higher achievement. No differences were found between family types in the level of ineffective parenting, consistency of discipline, level of rational parenting, and the presence of prosocial behavior in the children. Interestingly, however, in Cycle 2 single-parents showed more positive parenting although the difference between the two- parent families and single-parent families was very modest.

The findings would lend support to the notion proposed by Coleman that a single parent household may have a structural disadvantage or, to use his term, deficiency that reduces human, economic, and social capital. The more limited resources available to parents in single-parent families appears to make it harder for them to deal with the same challenges faced by two-parent families with the result that the children in the single-parent homes are showing more difficulties with adjustment and achievement.

Table 1 **Correlations Among Variables for Two-Parent Households (below diagonal) and Single-Parent Households (above the diagonal) for NLSCY Cycle 1 Data**

Variables		1	2	3	4	5	6	7	8	9	10	11	12	13	14
1	Socioeconomic Status	-	.26	-.24	-.14	-.19	.14	.18	.21	.11	.00	-.07	.09	.27	.26
2	Social Support	.17	-	-.25	-.51	.17	-.05	.04	-.08	.09	-.10	.20	-.03	.22	.15
3	Parental Depression	-.18	-.15	-	.26	-.08	.21	-.17	.13	-.11	.22	-.16	.25	-.14	-.07
4	Family Dysfunction	-.20	-.50	.31	-	-.40	.29	-.12	.27	-.17	.30	-.29	.17	-.19	-.19
5	Positive Parenting	.07	.07	-.07	-.19	-	-.32	-.02	-.32	.02	-.12	.26	-.10	.02	.08
6	Ineffective Parenting	-.05	-.02	.21	.22	-.22	-	-.28	.54	-.27	.49	-.30	.44	-.16	-.18
7	Consistency of Discipline	.21	.13	-.19	-.18	-09	-.23	-	-.21	.08	-.19	.06	-.18	.09	.14
8	Rational Parenting	-.12	-.12	.15	.31	-.30	.54	-.13	-	-.21	.36	-.38	.17	-.18	-.16
9	Academic Focus	.19	.02	-.06	-.08	-.02	-.15	.08	-.07	-	-.48	.15	-.28	.65	.59
10	Hyperactivity-Inattention	-.15	-.05	.15	.14	-.11	.40	-.19	.20	-.39	-	-.19	.53	-.40	-.36
11	Prosocial Behaviour	.11	.17	-.04	-.20	.21	-.24	.19	-.24	.12	-.16	-	-.11	.08	.05
12	Emotional Disorder	-.03	-.03	.24	.16	-.14	.38	-.13	.20	-.09	.40	-.07	-	-.20	-.07
13	Achievement Cycle 1	.24	.01	-.05	-.02	-.02	-.09	.11	-.04	.66	-.30	.07	-.05	-	.72
14	Achievement Cycle 2	.28	.04	-.09	-.05	-.02	-.10	.14	-.03	.56	-.30	.06	-.05	.72	-

Table 2 **Means, Standard Deviations, and Probability of Differences Between Means for Two-Parent and Single-Parent Households in NLSCY Cycles 1 and 2**

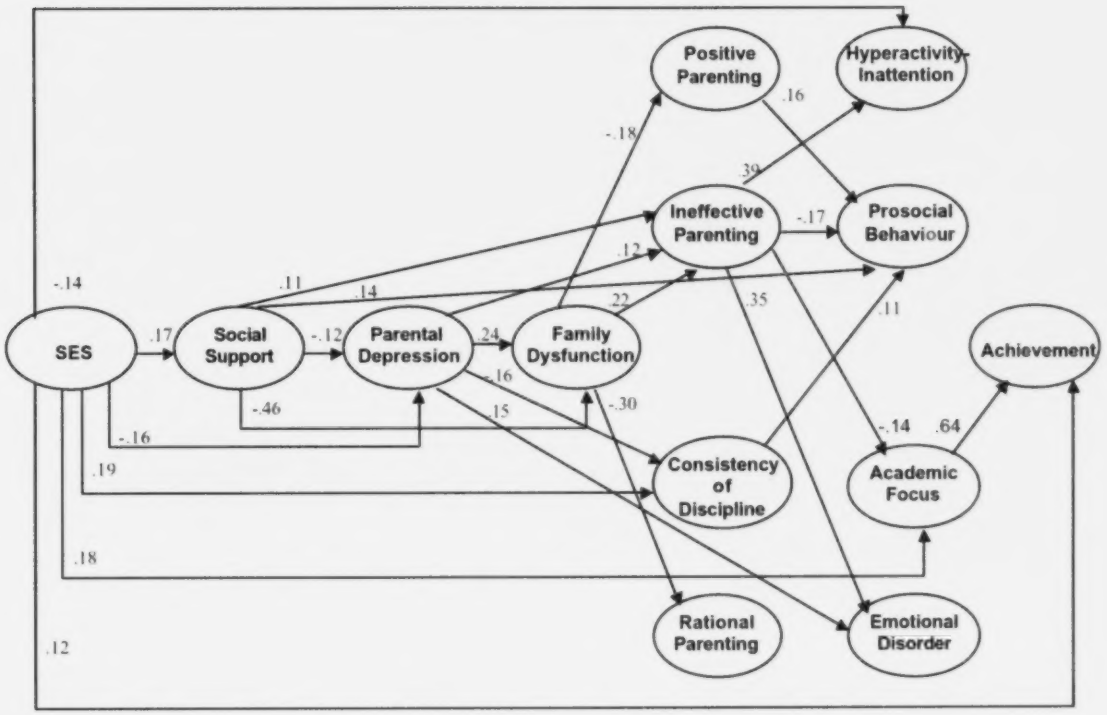
Variable		Cycle 1					Cycle 2				
		Two-Parent		Single-Parent			Two-Parent		Single-Parent		
		M	Sd	M	Sd	p	M	Sd	M	Sd	p
1	Socioeconomic Status	-.08	.69	-.60	.81	.001	-.02	.70	-.57	.83	.001
2	Social Support	14.74	2.66	14.02	2.66	.001	-	-	-	-	-
3	Parental Depression	4.21	4.54	6.69	5.64	.001	3.82	4.46	6.01	5.77	.001
4	Family Dysfunction	8.07	4.83	9.31	4.74	.001	8.06	4.75	8.96	4.84	.014
5	Positive Parenting	12.51	2.74	12.65	2.89	.518	12.11	2.59	12.58	3.11	.043
6	Ineffective Parenting	9.03	3.69	9.38	4.00	.215	8.72	3.65	9.08	3.65	.256
7	Consistency of Discipline	15.17	3.25	14.81	3.74	.199	15.30	3.06	15.27	3.32	.900
8	Rational Parenting	9.12	1.99	8.91	2.08	.161	8.73	1.87	8.51	2.00	.125
9	Hyperactivity-Inattention	4.43	3.52	5.41	4.01	.004	4.13	3.43	5.30	3.95	.001
10	Prosocial Behaviour	12.76	3.57	12.48	3.68	.297	13.18	3.50	13.40	3.65	.428
11	Academic Focus	4.04	.66	3.78	.77	.001	4.02	.70	3.79	.80	.001
12	Emotional Disorder	2.49	2.44	3.35	2.87	.001	2.56	2.52	3.29	2.83	.018
13	Achievement Cycle 1	3.48	1.21	3.08	1.26	.001	-	-	-	-	-
14	Achievement Cycle 2	-	-	-	-	-	3.47	1.19	3.02	1.26	.001

Note: Two-parent sample: N = 1,321; One-parent sample: N = 197:
- Indicates that data are not available or in the case of achievement, that data were collected at separate Cycles

4.1 Structural Equation Models Predicting Cycle 1 Achievement

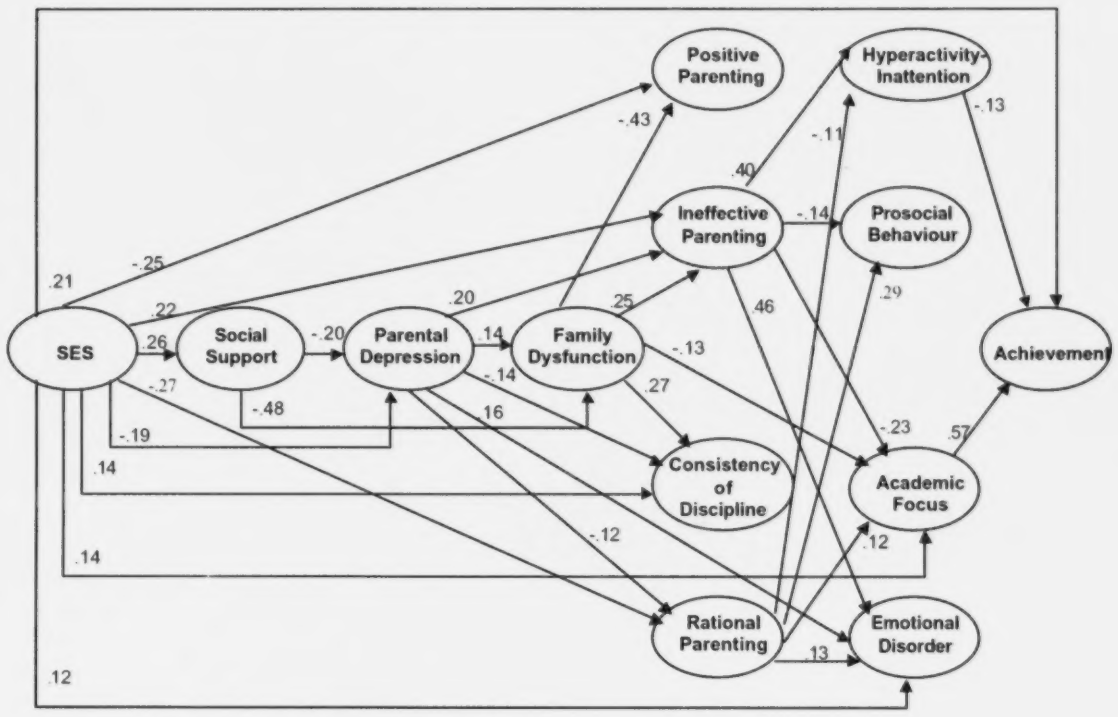
The variables selected from the NLSCY data that fit the Family-School Relationship Model were used in two separate linear structural equation analyses, first for intact two-parent households and then for the single-parent households. The initial step for each was to compute a just-identified model after which non-significant pathways were trimmed. The resulting over-identified models are reported in Figure 2 (two-parent households) and Figure 3 (single-parent households). The model reported in Figure 2 sustained a significant chi-square (X^2 (42) = 114.42, p > .01) largely due to the sample size which makes chi-square a poor measure of model adequacy in this case. In contrast, the Goodness of Fit Index was .987 while the adjusted fit was .972. The standardized root mean square residual was .03. Further, the Norm Fit Index was .967. With the exception of the significant chi-square all indicators suggest an excellent fit. The model in Figure 2 accounted for 45% of the variance in achievement by direct effects alone.

Figure 2 **The Over-identified Model for Two-Parent Households in NLSCY Cycle 1**



The model in Figure 3 had a non-significant chi-square (X^2 (35) = 27.74, $p < .804$). The Goodness of Fit Index was .979 with an adjusted fit of .945. The standardized root mean square residual was .034. The Norm Fit Index was .961. Again, an excellent fit is observed in Figure 3. This model accounted for 48% of the variance in achievement from direct effects.

Figure 3 **The Over-identified Model for One-Parent Households in NLSCY Cycle 1**



4.1.1 Two-parent families: Direct associations with SES

Of initial importance in Figure 2 is the wide array of direct, unmediated associations between SES and other variables within the model. Independent of all other associations in the model, SES maintains a modest, but significant (gamma = .12) association with achievement. Children born into a higher SES household are going to do a little better in school just because of the financial and human resources of the home and, probably, because of the family's enhanced social context. Further, SES has several other important associations in these data. SES is associated with reduced levels of hyperactivity and inattention in children with two-parents (gamma = -.14), with more parent perceived social support (gamma = .17), less parental depression (gamma = -.16), greater consistency in disciplinary actions (gamma = .19), and more teacher-rated academic focus by the child (gamma = .18). Economic standing,

social status and parent education capital were found to have a wide variety of influences on factors in this study even when the effects of other intervening variables are accounted for.

4.1.2 Two-parent families: The achievement model

A second way to consider Figure 2 is to trace all pathways that lead to student achievement -- the academic portion of the model. SES predicts higher levels of social support and lower levels of depression. Likewise, social support is also related to less family dysfunction. On the other hand, depression and family dysfunction are positively connected to ineffective parenting which may reduce a child's academic focus. Academic focus then has a direct effect on achievement (beta = .64). Parent depression, family dysfunction, hostile and angry parenting appear to have constraining effects on academic success. The possible negative effects of these processes seem to be partially offset by the positive effects of higher SES and stronger levels of social support.

4.1.3 Two-parent families: Other findings

Although not part of the initial planning for this study, a third way to examine Figure 2 is to consider all of the pathways that link with child characteristics which do not appear to be implicated in the child's achievement. To begin, and as already noted, SES is associated with greater perceived social support (gamma = .17), less parental depression (gamma = -.16), and greater consistency in discipline (gamma = .19). Social support is, in turn, associated with less parental depression (beta = -.12) and less family dysfunction (beta = -.46). Further, parental depression is linked to greater family dysfunction (beta = .24), less consistency in disciplining children (beta = -.16), more ineffective parenting (beta = .12), and to more anxiety and depression in the children (beta = .15). Then, family dysfunction is associated with less positive parenting (beta = -.18), more ineffective parenting (beta = .22), and less rational or democratic parenting (beta = -.30), although the latter variable does not appear related to any of the four child characteristics and plays no further roles in the processes studied in this report. Again and as with the case in the achievement model, SES and social support appear to act as buffers against the undesirable influences of parental depression and family dysfunction that reduce the social capital of the family. In turn, one observes that positive parenting (beta = .16) and consistency in discipline (beta = .11) are associated with greater prosocial behavior while ineffective parenting is connected to less

prosocial behavior by children (beta = -.17). The parent-child relationship variable that is widely associated with the emotional state of children in this analysis is ineffective parenting. This form of parenting is associated with more hyperactivity and inattention by children (beta = .39), less prosocial behavior (beta = -.17), less academic focus (beta = -.14), and greater anxiety and unhappiness in children (beta = .35). The evidence suggests that parental depression is associated with family dysfunction which in turn predicts less positive parenting, more ineffective parenting, and less democratic parenting. Social capital facilitates positive parenting and consistency in discipline, both of which predict greater prosocial behavior. Ineffective parenting constrains prosocial behavior and appears to reinforce hyperactivity or anxiety-depression.

4.1.4 One-parent families: Direct associations with SES

As in the two-parent families, SES has a wide variety of associations that again demonstrate the power of income, social status, and education on families and children. The pattern of associations, however, for SES in the one-parent families appears to be more complex than it is in the case of the two-parent families (see Figure 2). The level of SES in single-parent households has a direct association with children's academic achievement (gamma = .21) just as it does on the two-parent families. SES also has other effects on various levels in the model and a few of these findings are somewhat unexpected. As anticipated, SES is not only associated directly with children's achievement, but also with greater social support as perceived by the parent (gamma = .26), consistency in the use of discipline (gamma = .14), degree of a child's academic focus (gamma = .14), and less parental depression (gamma = -.19). Unexpectedly, and unlike the two-parent families, SES, in these data, is also associated with less positive parenting (gamma = -.25), less rational and democratic parenting (beta = -.27), more ineffective parenting (beta = .22), and more anxiety and depression for children (beta = .12). Apparently, when single-parents struggle to build the financial and educational capital of the family household, there are both positive and negative consequences.

4.1.5 One-parent families: The achievement model

When Figure 3 is examined with respect to the network of variables that predict academic achievement for single-parent children, we see a somewhat more complex situation than we do for two-parent-

families. Again we find that SES is associated positively and directly with achievement. It is also associated with social support and depression which both link to family dysfunction. Further, family dysfunction is associated with higher ineffective parenting behaviors (beta = .25), higher rates of consistent use of discipline/punishment (beta = .27), and lower levels of positive parenting (beta = -.43), although the latter two variables are not further related to any of the child characteristics. Family dysfunction has a small negative direct association with academic focus (beta = -.13). Ineffective parenting (beta = .40) and rational parenting (beta = -.11) are associated with hyperactivity and inattention in children. Unlike the case with the two-parent family, hyperactivity is associated with lower achievement (beta = -.13). Also, ineffective parenting (beta = -.23) is associated with less academic focus, while rational parenting is associated with higher academic focus (beta = .12). Further, academic focus predicts higher achievement (beta = .57).

4.1.6 One-parent families: Other findings

When we examine the child characteristics that are not related to child achievement in the one-parent model, we again find a slightly more complex picture than with two-parent families. The network of variables that link SES to social support, parental depression, and family dysfunction has already been described. SES is associated with social support for the family, with social support being linked to less parental depression which, in turn, predicts family dysfunction. Further, social support is associated with less family dysfunction. Parental depression also is associated with less consistency in discipline (beta = -.14), less use of rational parenting (beta = -.12), more ineffective parenting (beta = .20) and greater anxiety and depression in children (beta = .16). The influence of social capital in single-parent households indicates that social dysfunction in the family is associated with less positive parenting (beta = -.43), more ineffective parenting (beta = .25), greater consistency in discipline (beta = .27), and somewhat lower academic focus by the children (beta = .-13). Neither positive parenting nor consistency in discipline were significantly associated with variables in the remaining two levels of the model. However, ineffective parenting was associated with less prosocial behavior (beta = -.14) and less academic focus (beta = -.23) and with more hyperactivity (beta = .40) and anxiety (beta = .46).

4.2 Structural Equation Models Predicting Cycle 2 Achievement

In the Cycle 1 models, the single most powerful predictor of achievement was the teacher's perception of the degree of academic focus in the children. This finding is subject to the criticism that the strong relationship between them is largely due to the fact that the teacher made the rating in both cases. A more powerful test of the relationships between the family and child characteristics, on the one hand, and child achievement on the other, is provided if achievement ratings from Cycle 2 are used instead of those from the Cycle 1. The teachers in Cycle 2 are different from the teachers in Cycle 1. Also, examining achievement in Cycle 2 in relation to family processes in Cycle 1 provides stronger evidence of casual effects. The logic is that achievement events in Cycle 2 cannot have any possible causal role in determining the child and family characteristics measured in Cycle 1. However, this last step toward a causal interpretation of the findings must be taken with caution because the system of family relationships operating in Cycle 1 will likely have been sustained for Cycle 2. These variables reflect on-going systems of relationships that also have on-going bi-directional effects.

The two-parent model, presented in Figure 4, sustained a significant chi-square (X^2 (42) = 125.71, p = .001) with the significance level due, as before, to the large sample size. The Goodness of Fit Index was .986, with an adjusted fit of .969. The standardized root mean square residual was .032 and a Normed Fit Index was .961. The final over-identified model accounted for 34% of the variance by direct effects. The single-parent model in Figure 5 had a nonsignificant over-identified model chi-square (X^2 (34) = 26.53, p = .82) and a Goodness of Fit Index of .980. The adjusted goodness of fit index was .947. The standardized root mean square residual was .034. This model accounted for 41% of variance by direct effects. Both models presented in Figure 4 and 5 have excellent indicators of fit.

For the two-parent model using achievement in Cycle 2 (see Figure 4) an identical model to that reported in Figure 3 for the Cycle 1 data is observed. The only difference is that the association between children's academic focus and achievement is smaller (beta = .52).

In the case of single-parent households (see Figure 5) the general model is very similar to that found for single-parent families in Cycle 1 (see Figure 3) but with four additional significant findings for the

prediction of academic achievement two years later in Cycle 2. The new findings include: the elimination of family dysfunction's association with consistency in discipline (n.s); the emergence of a negative direct association between family dysfunction and rational parenting (beta = - .27); a small positive direct association between family dysfunction and children's hyperactivity and inattention (beta = .13); and, a negative association between a child's level of anxiety and depression and academic achievement (beta = -.17). As in the model for two-parent households, a child's academic focus in Cycle 1 had a significant prediction for academic achievement in Cycle 2 (beta = .52).

Figure 4 **The Over-identified Model for Two-Parent Households (NLSCY Cycle 1 Family Processes → Cycle 2 Achievement)**

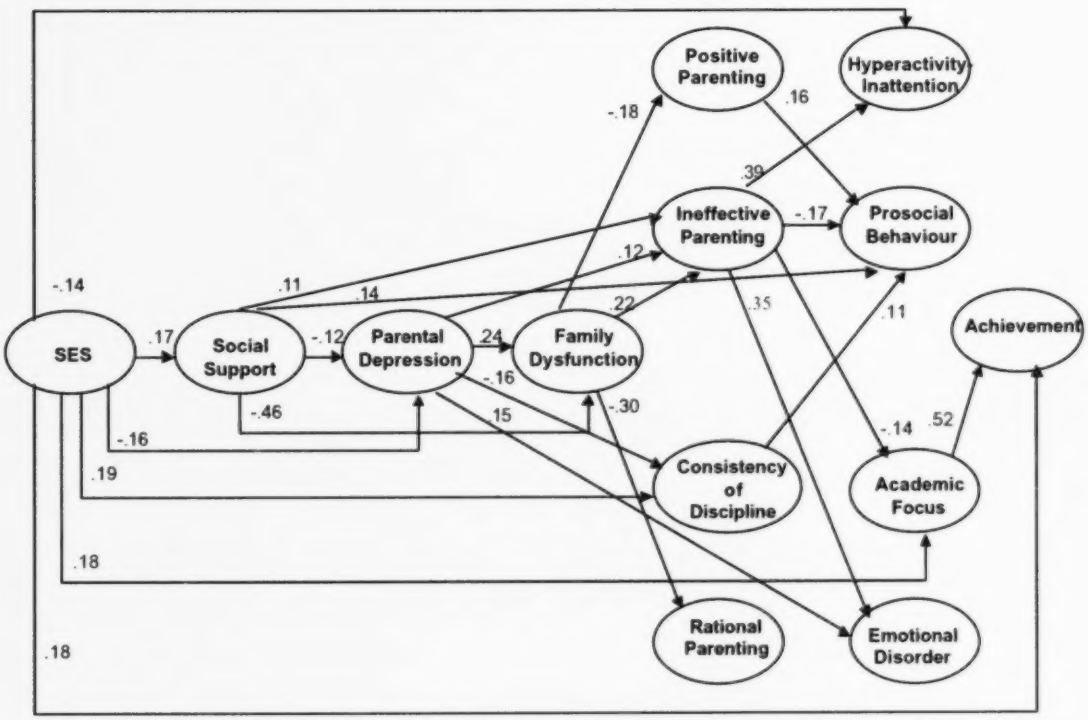
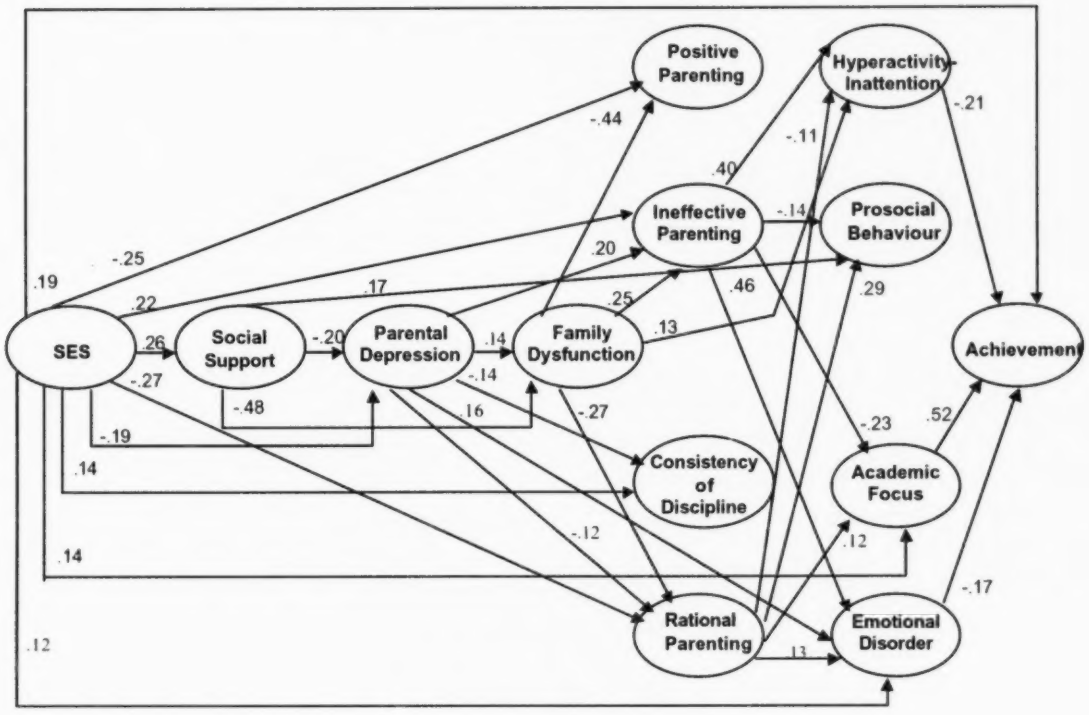


Figure 5 **The Over-identified Model for One-Parent Households (NLSCY Cycle 1 Family Processes → Cycle 2 Achievement)**



5. Discussion

The Family-School Relationship Model used to initially examine Cycle 1 data (Ryan & Adams, 1999) was validated. Further, a comparison of family types supports Coleman's (1988, 1990) and Demo and Acock's (1996) notion of at least a partially problematic structure in one-parent households. These findings in no way imply that single parents, as a group, are unsuccessful in their parenting. Rather, the findings suggest that the single-parent family may face more complex challenges than two-parent families as it struggles to sustain the material and social well being of its members.

Our findings suggest that socioeconomic status is highly important in its direct impact on a variety of family and child characteristics including the level of child achievement. In two-parent households, high SES, regardless of any other family relationship processes, is associated with children who are less hyperactive, more academically focused, and higher achievers in school. Thus, economic, educational, and status capital is transmitted to children through the informational, economic, and occupational status of parents within these two-parent households. Higher SES has other advantages. It is associated with having more community friends who provide support to the family. It reduces the likelihood that the prime caregiver for the children is depressed and is associated with more consistency in discipline/punishment. In general, higher SES, as a form of capital, enables healthy, successful, and symbolically complex role models. Also, higher levels of SES generally mean that parents will be using more complex forms of communication and hold parental expectations that children are to be successful, work-hard at school, and achieve well.

For single-parent families higher levels of SES indicators may suggest a more complex and, perhaps, less comfortable contribution to family relationships. The positive contributions of SES include greater community and relationship support for the parent, and again, children who will have greater academic focus and school achievement. However, we speculate that single-parents, usually mothers, who strive to build or to sustain a higher SES level may have to spread their own personal resources so thinly that their children have more difficulty in their social-emotional lives as well as school.[2] The contrast between

[2] In further research, analyses could compare single mothers who work to those who do not, and after controlling for differences in income, gauge the impact on child outcomes. This analysis could address an important line of investigation. Do children do better when single mothers with adequate income stay at home with their children?

the two-parent families in Figure 4 compared with the single parents in Figure 5 is interesting. In the two-parent family, only academic focus links to achievement. In the single-parent family both hyperactivity and child anxiety are linked to achievement along with academic focus. This suggests that the additional social resources available in a two-parent family may provide some level of adjustment capacity for the children so that the effects of conditions such as hyperactivity and depression/anxiety can be reduced. Possibly, the time away from home and at work needed to sustain a higher income may reduce positive and encouraging parenting behaviors and democratic parenting styles. Perhaps, due to the stress of maintaining a sound economic income, tired and exhausted single-parents may react with less effectiveness in their parenting behaviors. The time demands of earning the economic or educational capital associated with higher SES status may have both a positive and negative implication for children's development in the one-parent family.

Consistently, across family structure, it is observed that community and relationship support are associated with less depression and family dysfunction. The powerful connection between SES and social support demonstrates that economic standing is connected to social relationships that facilitate the parent's emotional state and the family's functioning as a unit. Further, social support can be associated with less use of anger and hostility in parent-child relationships. It comes as no surprise that many interventions include social support as a major tool in facilitating children's well-being (Albee & Gullotta, 1997).

We found that depression was associated with family dysfunction, which, in turn, reduces positive and encouraging parenting. It also reduces the use of rational/democratic forms of parenting while promoting ineffectiveness in parent-child relationships. These problematic forms of parenting then are associated with lower levels of prosocial behavior and academic interests, as well as characteristics such as hyperactivity and anxiety-depression. For the two-parent family, academic focus only was found to directly predict student achievement (in Cycle 1 and 2). However, for the single-parent families, all but prosocial behavior was observed, in one or the other analysis, to predict academic achievement. As would be expected, hyperactivity and anxiety and depression were associated with lower student achievement and academic focus and interest was associated with higher student achievement.

The traditional trinity of parent-child relationships—warmth, control, and democracy - plays a substantial role in any discussion of the social capital of parent-child relationships. In this investigation the warmth factor is represented by positive parenting and the converse of angry and hostile parenting, designated as ineffective parenting. Control was represented by consistency in discipline. Democracy was found in the rational parenting variable. Positive parenting which included warmth and acceptance was associated with children's prosocial behavior within two parent-homes only. Hostile or ineffective parenting was associated with less prosocial behavior by children, more hyperactivity and anxiety and depression, and less academic interests and focus. Where significant, consistency in discipline was only associated with prosocial behavior. Rational parenting was associated with less of hyperactivity and anxiety and depression, but more academic focus and prosocial behavior when it was observed in the models. The findings reported on the relationship between social capital of parent-child relationships are consistent with most past research in the study of family socialization.

Across both family types, the power of developing a sense of academic focus is a major feature of a child's academic success. This is not to disregard the importance of mental health indicators that are featured in the models on the single-parent family, but to underscore the key feature that is involved in being a good student, who is interested in school work, and has the competencies required for being successful in school. These data show that the child, the teacher, the family, and the community, all have evident influences on the formation of a child's academic focus and successes in school.

6. Implications for Social Policy and Intervention

The results of this study suggest several different policy directions as well as appropriate approaches to interventions aimed at promoting better academic performance in school-aged children. First, the large and pervasive impact of socio-economic status on the system of relationships in the family and on academic achievement directly points to the importance of the material resources that a family can draw upon. The conclusion articulated in our earlier study (Ryan & Adams, 1999) of the NLSCY on this same theme remains valid following the current analyses:

> The data clearly indicated that children in higher income families do substantially better in school regardless of what happens within their families. Not only is the children's achievement directly affected by a higher standard of living, but such children also acquire more productive school work habits and academic skills. Moreover, the general quality of family life is strongly affected directly and indirectly by economic well being. Assuring adequate family income and educational learning opportunities for parents are almost essential social objectives if the educational success of the children in those families is to be enhanced. Social policy initiatives such as this must necessarily come from government either through direct delivery of economic resources to families or through the creation of employment and training conditions so that all families are adequately supported through employment income.

The present study, however, suggests that this sort of policy implication might be more relevant to two-parent families. There are indications that the needs of the single-parent family are more complex. Simply arranging for the single parent to have a job might possibly induce a level of stress and pressure that undermines the family's capacity to cope with the all the demands that are placed upon it. Unfortunately, the data considered in this study cannot do much more than flag the possibility that single parents will need much more sophisticated assistance than two-parent families.

As was the case with the previous study, the data point to the possibility of interventions at multiple levels within the family. It is possible to work directly with the children to develop better academic skills although it must be recognized that much of this sort of isolated effort could be undone by unproductive processes within the relationship system of the family. It is also possible to intervene at the level of parent-child relationships or the whole family to clarify modes of communication and interaction. This would, of course, begin to involve professionals from the mental health sectors thus significantly complicating the problem of service provision and raising the larger issue of service coordination and

integration. Similar issues arise when simpler interventions aimed primarily at the mental health of the parents are targeted.

The most significant implication from the study, however, is the fact that families (of whichever type) as complex relational systems will probably respond best to interventions that are mindful of the range of levels that typify family functioning. Isolating an intervention to only one level of the family runs the risk of other family processes systematically undoing the effects. Ultimately, the most powerful sorts of interventions will be those that consist of multiple interventions that are coordinated to deal with the countervailing forces that operate in every family.

7. Limitations of the Study

One obvious limitation of this report is that to compare two-parent and single-parent families, we had to reduce our sample size. Therefore, the generalization of our findings may be limited, but nonetheless, they should be considered suggestive. Further, our use of difference scores and regression residuals were unsuccessful. Therefore, we have relied on reports of relative ranking in teacher judged academic achievement in Cycle 1 and in Cycle 2. Our Family-School Relationship Model helps to construct a consistent model within Cycle 1 and in Cycle 2, and predictions from Cycle 1 family processes to Cycle 2 achievement. However, we were not able to predict the degree of change in achievement using these techniques. In fact, very little change in achievement performance as judged by teachers was observed over the two year period. Further, the NLSCY doesn't include a Level 2 variable for all ages (i.e., none for the 6-9 children, but one for the 10- 11 year children) that deals with parent-child relationships concerning school activities, as dealt with at home, together. Therefore, our model can't be fully tested in predicting children's school achievement. Finally, the complex model used in this study placed such a demand on the sample that not enough families who had complete data were observed to have had changes in marital status. Perhaps, a less sophisticated model could be constructed and tested that would not over tax the sample. A better alternative might be to use Cycle 1 through Cycle 3 data, where the number of changes in family status are likely to have occurred to test the use of the model in determining the impact of changes in family structure. This, however, necessitates complete data sets at all points of data collection.

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